## RAW SEQUENCE LISTING

EFS

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number:  $\frac{10/559, 639A}{1540}$ Source:  $\frac{1540}{3/20/07}$ 

## ENTERED



**IFWO** 

RAW SEQUENCE LISTING DATE: 03/20/2007
PATENT APPLICATION: US/10/559,639A TIME: 14:59:41

Input Set: N:\efs\03\_20\_07\10559639A\_efs\SeqListingRev1.txt

Output Set: N:\CRF4\03202007\J559639A.raw

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3 <110> APPLICANT: Ben-Yehuda, Dina
             Ashhab, Yaqoub
             Nachmias, Boaz
     7 <120> TITLE OF INVENTION: Livin-derived peptides, compositions and uses thereof
     9 <130> FILE REFERENCE: 16033/US/03
    11 <140> CURRENT APPLICATION NUMBER: 10/559,639A
C--> 13 <141> CURRENT FILING DATE: 2005-12-02
    13 <150> PRIOR APPLICATION NUMBER: IL 156263
    14 <151> PRIOR FILING DATE: 2003-06-02
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    16 <150> PRIOR APPLICATION NUMBER: PCT/IL2004/000461
    17 <151> PRIOR FILING DATE: 2004-05-31
    19 <160> NUMBER OF SEQ ID NOS: 11
    21 <170> SOFTWARE: PatentIn version 3.3
    23 <210> SEQ ID NO: 1
    24 <211> LENGTH: 246
    25 <212> TYPE: PRT
    26 <213> ORGANISM: Homo sapiens
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    34 Glu Gly Ala Gly Ala Thr Leu Ser Arg Gly Pro Ala Phe Pro Gly Met
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                                        25
    38 Gly Ser Glu Glu Leu Arg Leu Ala Ser Phe Tyr Asp Trp Pro Leu Thr
    42 Ala Glu Val Pro Pro Glu Leu Leu Ala Ala Gly Phe Phe His Thr
                                55
    46 Gly His Gln Asp Lys Val Arg Cys Phe Phe Cys Tyr Gly Gly Leu Gln
                           70
    50 Ser Trp Lys Arg Gly Asp Asp Pro Trp Thr Glu His Ala Lys Trp Phe
                                            90
    54 Pro Ser Cys Gln Phe Leu Leu Arg Ser Lys Gly Arg Asp Phe Val His
                   100
                                        105
    58 Ser Val Gln Glu Thr His Ser Gln Leu Leu Gly Ser Trp Asp Pro Trp
                                   120
    62 Glu Glu Pro Glu Asp Ala Ala Pro Val Ala Pro Ser Val Pro Ala Ser
    66 Gly Tyr Pro Glu Leu Pro Thr Pro Arg Arg Glu Val Gln Ser Glu Ser
    70 Ala Gln Glu Pro Gly Gly Val Ser Pro Ala Glu Ala Gln Arg Ala Trp
                       165
                                            170
    74 Trp Val Leu Glu Pro Pro Gly Ala Arg Asp Val Glu Ala Gln Leu Arg
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78 Arg Leu Gln Glu Glu Arg Thr Cys Lys Val Cys Leu Asp Arg Ala Val

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86 Pro Gly Leu Gln Leu Cys Pro Ile Cys Arg Ala Pro Val Arg Ser Arg
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87 225
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106 - 20
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109 Gly Ser Glu Glu Leu Arg Leu Ala Ser Phe Tyr Asp Trp Pro Leu Thr
           35
113 Ala Glu Val Pro Pro Glu Leu Leu Ala Ala Gly Phe Phe His Thr.
117 Gly His Gln Asp Lys Val Arg Cys Phe Phe Cys Tyr Gly Gly Leu Gln
118 65
                        70
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121 Ser Trp Lys Arg Gly Asp Asp Pro Trp Thr Glu His Ala Lys Trp Phe
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                   85
125 Pro Ser Cys Gln Phe Leu Leu Arg Ser Lys Gly Arg Asp Phe Val His
                                    105
               100
129 Ser Val Gln Glu Thr His Ser Gln Leu Leu Gly Ser Trp Asp Pro Trp
                                120
                                                    125
133 Glu Glu Pro Glu Asp Ala Ala Pro Val Ala Pro Ser Val Pro Ala Ser
       130
                            135
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137 Gly Tyr Pro Glu Leu Pro Thr Pro Arg Arg Glu Val Gln Ser Glu Ser
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141 Ala Gln Glu Pro Gly Ala Arg Asp Val Glu Ala Gln Leu Arg Arg Leu
                   165
                                        170
                                                            175
145 Gln Glu Glu Arg Thr Cys Lys Val Cys Leu Asp Arg Ala Val Ser Ile
146
               180
                                    185
149 Val Phe Val Pro Cys Gly His Leu Val Cys Ala Glu Cys Ala Pro Gly
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153 Leu Gln Leu Cys Pro Ile Cys Arg Ala Pro Val Arg Ser Arg Val Arg
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157 Thr Phe Leu Ser
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172 Ser His Trp Ala Ala Gly Asp Gly Pro Thr Gln Glu Arg Cys Gly Pro 20 25 176 Arg Ser Leu Gly Ser Pro Val Leu Gly Leu Asp Thr Cys Arg Ala Trp 180 Asp His Val Asp Gly Gln Ile Leu Gly Gln Leu Arg Pro Leu Thr Glu 184 Glu Glu Glu Glu Gly Ala Gly Ala Thr Leu Ser Arg Gly Pro Ala 185 65 70 75 188 Phe Pro Gly Met Gly Ser Glu Glu Leu Arg Leu Ala Ser Phe Tyr Asp 192 Trp Pro Leu Thr Ala Glu Val Pro Pro Glu Leu Leu Ala Ala Gly 193 100 105 196 Phe Phe His Thr Gly His Gln Asp Lys Val Arg Cys Phe Phe Cys Tyr 115 120 200 Gly Gly Leu Gln Ser Trp Lys Arg Gly Asp Asp Pro Trp Thr Glu His 130 135 140 204 Ala Lys Trp Phe Pro Ser Cys Gln Phe Leu Leu Arg Ser Lys Gly Arg 150 155 208 Asp Phe Val His Ser Val Gln Glu Thr His Ser Gln Leu Leu Gly Ser . 170 212 Trp Asp Pro Trp Glu Glu Pro Glu Asp Ala Ala Pro Val Ala Pro Ser 180 213 185 216 Val Pro Ala Ser Gly Tyr Pro Glu Leu Pro Thr Pro Arg Arg Glu Val 195 200 220 Gln Ser Glu Ser Ala Gln Glu Pro Gly Gly Val Ser Pro Ala Glu Ala 215 224 Gln Arg Ala Trp Trp Val Leu Glu Pro Pro Gly Ala Arg Asp Val Glu 230 235 228 Ala Gln Leu Arg Arg Leu Gln Glu Glu Arg Thr Cys Lys Val Cys Leu 245 250 232 Asp Arg Ala Val Ser Ile Val Phe Val Pro Cys Gly His Leu Val Cys 260 265 236 Ala Glu Cys Ala Pro Gly Leu Gln Leu Cys Pro Ile Cys Arg Ala Pro 275 240 Val Arg Ser Arg Val Arg Thr Phe Leu Ser 290 244 <210> SEQ ID NO: 4 245 <211> LENGTH: 280 246 <212> TYPE: PRT 247 <213> ORGANISM: Homo sapiens 249 <400> SEQUENCE: 4 251 Met Gly Pro Lys Asp Ser Ala Lys Cys Leu His Arg Gly Pro Gln Pro 255 Ser His Trp Ala Ala Gly Asp Gly Pro Thr Gln Glu Arg Cys Gly Pro 20 25 259 Arg Ser Leu Gly Ser Pro Val Leu Gly Leu Asp Thr Cys Arg Ala Trp 263 Asp His Val Asp Gly Gln Ile Leu Gly Gln Leu Arg Pro Leu Thr Glu

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267 Glu Glu Glu Glu Gly Ala Gly Ala Thr Leu Ser Arg Gly Pro Ala
268 65
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271 Phe Pro Gly Met Gly Ser Glu Glu Leu Arg Leu Ala Ser Phe Tyr Asp
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275 Trp Pro Leu Thr Ala Glu Val Pro Pro Glu Leu Leu Ala Ala Gly
276
                                     105
279 Phe Phe His Thr Gly His Gln Asp Lys Val Arg Cys Phe Phe Cys Tyr
280
            115
                                 120
283 Gly Gly Leu Gln Ser Trp Lys Arg Gly Asp Asp Pro Trp Thr Glu His
                            135
287 Ala Lys Trp Phe Pro Ser Cys Gln Phe Leu Leu Arg Ser Lys Gly Arg
                        150
                                             155
291 Asp Phe Val His Ser Val Gln Glu Thr His Ser Gln Leu Leu Gly Ser
                    165
                                         170
295 Trp Asp Pro Trp Glu Glu Pro Glu Asp Ala Ala Pro Val Ala Pro Ser
                180
                                    185
299 Val Pro Ala Ser Gly Tyr Pro Glu Leu Pro Thr Pro Arg Arg Glu Val
            195
                                 200
                                                     205
303 Gln Ser Glu Ser Ala Gln Glu Pro Gly Ala Arg Asp. Val Glu Ala Gln
        210
                            215
                                                 220
307 Leu Arg Arg Leu Gln Glu Glu Arg Thr Cys Lys Val Cys Leu Asp Arg
308 225
                        230
                                             235
311 Ala Val Ser Ile Val Phe Val Pro Cys Gly His Leu Val Cys Ala Glu
312
                    245
                                         250
315 Cys Ala Pro Gly Leu Gln Leu Cys Pro Ile Cys Arg Ala Pro Val Arg
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319 Ser Arg Val Arg Thr Phe Leu Ser
320
            275
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324 <211> LENGTH: 27
325 <212> TYPE: DNA
326 <213> ORGANISM: Artificial Sequence
328 <220> FEATURE:
329 <223> OTHER INFORMATION: Primer for site-directed mutagenesis
331 <400> SEQUENCE: 5
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332 ggggaattct ggtcagagcc agtgttc
335 <210> SEQ ID NO: 6
336 <211> LENGTH: 24
337 <212> TYPE: DNA
338 <213> ORGANISM: Artificial Sequence
340 <220> FEATURE:
341 <223> OTHER INFORMATION: Primer for site-directed mutagenesis
343 <400> SEQUENCE: 6
344 gggggatccg gagcccactc tgca
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349 <212> TYPE: DNA
350 <213> ORGANISM: Artificial Sequence;
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PATENT APPLICATION: US/10/559,639A TIME: 14:59:41

Input Set : N:\efs\03\_20\_07\10559639A\_efs\SeqListingRev1.txt

Output Set: N:\CRF4\03202007\J559639A.raw

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365	<223> OTHER INFORMATION: Mega-primer to introduce mutation D238E	
367	<400> SEQUENCE: 8	
368	ccagggaagt agaggcgca	19
371	<210> SEQ ID NO: 9	
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373	<212> TYPE: DNA	
374	<213> ORGANISM: Artificial Sequence	
376	<220> FEATURE:	
377	<223> OTHER INFORMATION: Primer to construct cleavage fragment	
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VERIFICATION SUMMARY

DATE: 03/20/2007 TIME: 14:59:42

PATENT APPLICATION: US/10/559,639A

Input Set : N:\efs\03\_20\_07\10559639A\_efs\SeqListingRev1.txt

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L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date